IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants	:	Wolf-Bern Frommer
U.S. Serial No.	:	Not yet assigned (Divisional of application serial no. 08/964,939)
Filing Date	:	Herewith
For	:	DNA SEQUENCES FOR AN AMINO ACID TRANSPORTER, PLASMIDS, BACTERIA, YEASTS AND PLANTS CONTAINING A TRANSPORTER AND THEIR USE
Examiner	:	TBA
Group Art Unit	:	TBA

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PRELIMINARY AMENDMENT

Assistant Commissioner for Patents
Washington, D.C. 20231

Dear Sir:

Prior to fee calculation and examination of the above identified application, please amend the above-identified application, without prejudice, without admission, without surrender of subject matter, and without any intention of creating any estoppel as to equivalents, as follows:

IN THE SPECIFICATION:

One page 1, before the first line of text, please add the following paragraph:

--This application is a divisional of application Serial No.08/964,939 filed November 5, 1997, now allowed, which is a divisional of application Serial No. 08/362,512 filed January 05, 1995, now U.S. Patent No. 5,719,043 granted February 17, 1998 as the National Phase of PCT/EP93/01736 filed July 1, 1993, designating the U.S., published as WO 94/01559, and claiming priority from German application P 4 22 2315.6 filed July 5, 1992. All of the above-mentioned applications, as well as all documents cited therein and documents referenced or cited in documents cited herein, are hereby incorporated herein by reference. - -

Immediately after page 29 and before the first page of claims, if appropriate, please insert the enclosed Sequence Listing, which is identical to that which was filed in parent application Serial No. 08/964,939, now allowed, a paper copy of which, as printed in that patent, is attached. Please renumber the pages accordingly.

IN THE CLAIMS:

Please cancel claims 1 to 20, without prejudice, without admission, without surrender of subject matter, and without any intention of creating any estoppel as to equivalents.

Please add the following new claims:

21. (New) An isolated DNA molecule comprising a nucleotide sequence encoding a plant amino acid transporter for membrane transport.

22. (New) A plasmid comprising the isolated DNA molecule of claim 21.

23. (New) A method for producing a transformed host cell comprising transforming the cell to comprise the isolated DNA molecule of claim 21.

24. (New) A method for producing a transformed host cell comprising transforming the cell to comprise the plasmid of claim 22.

25. (New) A transgenic plant transformed to contain the isolated DNA molecule of claim 21 and comprising an altered amount of amino acid transporter activity relative to a non-transformed plant.

26. (New) A transgenic plant comprising cells comprising the isolated DNA molecule of claim 21.

27. (New) A bacterium comprising the isolated DNA molecule of claim 21.

28. (New) A bacterium comprising the plasmid of claim 22.

29. (New) A method for isolating a DNA molecule which encodes a plant amino acid transporter, comprising:

probing a library of plant nucleic acid molecules with the isolated molecule of claim 21, and

isolating plant nucleic acid molecules which hybridize to the isolated DNA molecule.

30. (New) The method for isolating a DNA molecule which encodes a plant amino acid transporter of claim 29 further comprising an *Arabidopsis* amino acid transporter.

31. (New) The plasmid of claim 22 further comprising a promoter operably linked to the isolated DNA molecule.

32. (New) The plasmid of claim 22 further comprising a transcriptional termination sequence operably linked to the isolated DNA molecule.

33. (New) The plasmid of claim 31 further comprising a transcriptional termination sequence operably linked to the isolated DNA molecule.

34. (New) The plasmid of claim 22 wherein the isolated DNA molecule is in the sense orientation.

35. (New) The plasmid of claim 22 wherein the isolated DNA molecule is in the anti-sense orientation.

36. (New) A method for producing a host cell capable of an increased amount of an amino acid transporter relative to a non-transformed cell comprising

transforming the cell with the plasmid of claim 34.

37. (New) A method for producing a host cell capable of a decreased amount of an amino acid transporter relative to a non-transformed cell comprising

transforming the cell with the plasmid of claim 35.

38. (New) A yeast strain comprising the isolated DNA molecule of claim 21.

39. (New) A method for altering the transport of metabolites in a host cell comprising

transforming the cell so as to comprise the isolated DNA molecule of claim 21.

40. (New) A cell obtainable from the method of claim 23.

41. (New) A cell obtainable from the method of claim 24.

42. (New) A cell obtainable from the method of claim 36.

43 (New) A cell obtainable from the method of claim 37.

44. (New) A cell obtainable from the method of claim 39.

45. (New) A transgenic plant comprising an altered amount of amino acid transporter activity by comprising a number of copies of the isolated DNA molecule of claim 21.

46. (New) A method for producing a plant comprising transforming plant cells to comprise the isolated DNA molecule of claim 21, and regenerating a transformed plant from the plant cells.

47. (New) The method of claim 46 wherein the isolated DNA molecule is in the anti-sense orientation and the transformed plant has a decreased amount of amino acid transporter relative to a non-transformed plant.

48. (New) The method of claim 46 wherein the isolated DNA molecule is in the sense orientation and the transformed plant has an increased amount of amino acid transporter relative to a non-transformed plant.

49. (New) A plant obtainable from the method of claim 46.

50. (New) A plant obtainable from the method of claim 47.

51. (New) A plant obtainable from the method of claim 48.

52. (New) An isolated DNA molecule comprising a nucleotide sequence encoding a plant amino acid transporter for membrane transport which complements a yeast peptide transport mutation.

53. (New) The isolated DNA molecule of claim 52 wherein the yeast has a proline transport mutation or a histidine synthesis and transport mutation.

54. (New) The isolated DNA molecule of claim 53 wherein the yeast is strain 22574d or JT16.

55. (New) A first isolated DNA molecule comprising a nucleotide sequence encoding a plant amino acid transporter for membrane transport which hybridizes to a second isolated DNA molecule consisting of the coding region of SEQ ID NO:1.

56. (New) A first isolated DNA molecule comprising a nucleotide sequence

encoding a plant amino acid transporter for membrane transport which hybridizes to a second isolated DNA molecule consisting of the coding region of SEQ ID NO:3.

57. (New) A first isolated DNA molecule comprising a nucleotide sequence encoding a plant amino acid transporter for membrane transport which hybridizes to a second isolated DNA molecule encoding an amino acid sequence as shown in SEQ ID NO:2.

58. (New) A first isolated DNA molecule comprising a nucleotide sequence encoding a plant amino acid transporter for membrane transport which hybridizes to a second isolated DNA molecule encoding an amino acid sequence as shown in SEQ ID NO:4.

REMARKS

This Preliminary Amendment adds a lineage to the present application. This application is a divisional of application Serial No. 08/964,939 filed November 5, 1997, now allowed, which is a divisional of application serial no. 08/362,512 filed January 05, 1995, now U.S. Patent No. 5,719,043, granted February 17, 1998 as the National Phase of PCT/EP93/01736, filed July 1, 1993, designating the U.S., published as WO 94/01559, and claiming priority under 35 U.S.C. § 119 to German application P 4 22 2315.6 filed July 5, 1992.

Claims 1 to 20 are pending in this application.

Claims 1 to 20 are cancelled by this amendment and are replaced with new claims 21 to 58. New claims 21 to 58 are added to more particularly point out and distinctly claim the subject matter which the Applicant regards as his invention. These claims are directed to subject matter which was either withdrawn from consideration or cancelled in the parent application. The right to file divisional applications to the cancelled subject matter was expressly reserved in the parent application. No new matter is added by this amendment and support for these new claims can be found in the specification and the claims as originally filed.

It is submitted that these claims, as originally presented, are patentably distinct over the prior art cited by the Examiner in the parent application, and that these claims were in full compliance with the requirements of 35 U.S.C. § 112. Changes to these claims, as presented herein, are not made for the purpose of patentability within the meaning of 35 U.S.C. §§ 101, 102, 103 or 112. Rather, these changes are made simply for clarification and to round out the scope of protection to which Applicant is entitled.

Pursuant to 35 U.S.C. § 119, Applicant claims priority benefit to German patent application 4 22 2315.6 filed July 5, 1992. The Examiner acknowledged the claim for foreign priority under 35 U.S.C § 119 in the parent application in the Office Action mailed September 1, 1998, based on the certified copy of the priority document filed in application Serial No. 08/362,512. Accordingly, it is respectfully requested that the Examiner acknowledge the claim to priority under 35 U.S.C. § 119 in this application.

As to the sequence listing, it is stated that the sequence listing in this application is the same as in the parent application Serial No. 08/964,939, submitted in this application on May 28, 1998, and the prior parent application Serial No. 08/362,512. It is respectfully requested that the U.S. PTO use the electronic version of the sequence listing in the parent application, making any necessary changes therein for this application, e.g., as to Serial Number and filing date. A copy of the hard copy of the sequence listing filed in that prior application is submitted herewith.

It is believed that the Sequence Listing conforms to the requirements of 37 C.F.R. §1.823(b). The Statements required by 37 C.FR. §1.821(f) and (g) are set forth below.

Pursuant to 37 C.F.R. §1.821(g), the undersigned attorney of record hereby states that this submission, filed in accordance with 37 C.F.R. §1.821(g), does not contain new matter.

Pursuant to 37 C.F.R. §1.821(f), the undersigned attorney hereby states that the content of the paper copy submitted herewith, and the computer readable copy of the Sequence listing submitted in U.S. Serial No. 08/964,939 in accordance with 37 C.F.R. §1.821(c) and (e), respectively, are the same.

In view of the amendments, remarks and enclosures herewith, the application complies with the requirements for computer readable disclosure of the biological sequences under 37 C.F.R. §1.821-1.825.

Also enclosed herewith is an I.D.S. which cites the publications cited in the parent application. It is requested that the Examiner make these publications of record in this application and that a copy of the PTO 1449 form be initialed by the Examiner and returned to the Applicant. Finally, in order to complete the record, Applicants submit a copy of the Declaration and Power of Attorney filed in the parent application.

Entry of this Preliminary Amendment and an early examination of claims 21 to 58 on the merits are respectfully requested. It is believed that no additional fees are due for entry and consideration of this Preliminary Amendment and related papers. Any deficiency or overpayment in this fee, or any other fee occasioned by this paper or any overpayment in any other fee occasioned by this paper, may be charged or credited to Deposit Account No. 50-0320.

Respectfully submitted,

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